

PCT

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12/1/04
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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

165A

Applicant's or agent's file reference CD009PCT	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/JP2004/001024	International filing date (day/month/year) 02/02/2004	(Earliest) Priority Date (day/month/year) 01/08/2003
Applicant CARDIO INCORPORATED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☒ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

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International application No.

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Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
 - a. type of material
 - ☒ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material
 - ☒ in written format
 - ☒ in computer readable form
 - c. time of filing/furnishing
 - ☒ contained in the international application as filed
 - ☐ filed together with the international application in computer readable form
 - ☐ furnished subsequently to this Authority for the purpose of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

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International Application No
PCT/JP2004/001024

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61F2/00 A61L27/38 C12N5/06 A61K31/715

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61L C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 432 711 B1 (DINSMORE JONATHAN H ET AL) 13 August 2002 (2002-08-13)	1,2,8, 10-17, 22,23
Y	abstract column 5, line 62 - column 6, line 25; examples 1-3 ----- -/--	18-21, 24-26

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

1 July 2004

Date of mailing of the international search report

12/08/2004

Name and mailing address of the ISA

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Authorized officer

Mateo Rosell, A.M.

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SHIMIZU TATSUYA ET AL: "Fabrication of pulsatile cardiac tissue grafts using a novel 3-dimensional cell sheet manipulation technique and temperature-responsive cell culture surfaces." CIRCULATION RESEARCH. 22 FEB 2002, vol. 90, no. 3, 22 February 2002 (2002-02-22), pages e40-E48, XP002285777 ISSN: 1524-4571 cited in the application the whole document	18-21, 24-26
Y	TERUO OKANO: "Cardiac tissue reconstruction based on cell sheet engineering" JAPANESE CIRCULATION SOCIETY, 'Online! 2002, pages 1-4, XP002285778 Retrieved from the Internet: URL: http://www.j-circ.or.jp/english/session/reports/66th-ss/okano.htm 'retrieved on 2004-06-23! the whole document	18-21, 24,26
X	WO 01/07568 A (DIACRIN INC) 1 February 2001 (2001-02-01) page 2, lines 18-24 page 3, columns 15-24 page 33, line 14 - page 34, line 7	1,5,6, 9-17,22, 23
X	KELLAR ROBERT S ET AL: "Scaffold-based three-dimensional human fibroblast culture provides a structural matrix that supports angiogenesis in infarcted heart tissue" CIRCULATION, vol. 104, no. 17, 23 October 2001 (2001-10-23), pages 2063-2068, XP002285779 ISSN: 0009-7322 abstract page 2064, left-hand column, paragraph 2 - page 2065, right-hand column, paragraph 1	1,6,10, 16,17, 22,23
	-/--	

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>MIYAGAWA SHIGERU ET AL: "A tissue engineered contractile cardiac graft improves the cardiac performance in infarct rat heart"</p> <p>23 October 2001 (2001-10-23), CIRCULATION, VOL. 104, NR. 17 SUPPLEMENT, PAGE(S) II.599 , SCIENTIFIC SESSIONS 2001 OF THE AMERICAN HEART ASSOCIATION; ANAHEIM, CALIFORNIA, USA; NOVEMBER 11-14, 2001 , XP008031972</p> <p>ISSN: 0009-7322</p> <p>abstract</p>	<p>1,10-15, 17-24,26</p>
P,A	<p>-----</p> <p>BACH A D ET AL: "Expression of Trisk 51, agrin and nicotinic-acetylcholine receptor epsilon-subunit during muscle development in a novel three-dimensional muscle-neuronal co-culture system."</p> <p>CELL & TISSUE RESEARCH, vol. 314, no. 2, November 2003 (2003-11), pages 263-274, XP002285780</p> <p>ISSN: 0302-766X</p> <p>abstract</p> <p>page 265, left-hand column, paragraph 4 - right-hand column, paragraph 1</p> <p>page 266, right-hand column, paragraph 1</p> <p>page 269, right-hand column, paragraph 1 -</p> <p>page 270, left-hand column, paragraph 1</p> <p>-----</p>	<p>1,4,5, 9-16</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/001024

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6432711	B1	13-08-2002	US 2002187550 A1	12-12-2002
			CA 2174746 A1	11-05-1995
			EP 0725817 A1	14-08-1996
			WO 9512665 A1	11-05-1995
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WO 0107568	A	01-02-2001	AU 770889 B2	04-03-2004
			AU 6234600 A	13-02-2001
			CA 2378643 A1	01-02-2001
			EP 1200559 A2	02-05-2002
			JP 2003505475 T	12-02-2003
			WO 0107568 A2	01-02-2001
			US 2003113301 A1	19-06-2003
			US 6673604 B1	06-01-2004
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